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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,637	04/11/2001	Alfons Gail	10537/96	1822

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ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

BANNAPRADIST, LISA M

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 04/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,637

Applicant(s)

GAIL ET AL.

Examiner

Lisa Bannapradist

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office Action is persuasive and, therefore, the finality of that last action mailed January 2, 2003 is hereby withdrawn. Thus, new grounds of rejection follow below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 1-5, 7, 10, and 11** are rejected under 35 U.S.C. 103(a) as being obvious over PCT WO98/53229 to Werner in view of US 5,351,971 to Short.

Werner discloses a brush seal comprising a bristle housing (2) including a cover plate (3) and a supporting plate (4), bristles (5), circumferential surface (9), two side surfaces (vertical portions of 3 and 4), a first positioning arrangement on a side surface (portion of 4 abutting 2), and a second positioning arrangement on a rotor (portion of 2 abutting 4). The cover plate includes a flanged section (7) with an undercut (at 6) and inner surface (at 8) and the supporting plate includes an axial section (horizontal portion of 4). The cover plate and supporting plate are formed by non-cutting shaping and deep drawing (col. 1, line 66).

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Werner fails to disclose a positive-locking arrangement between the first positioning arrangement and the second positioning element. Werner fails to disclose this positive locking manner for the purpose of preventing relative rotation and positioning the first element relative to the second element to prevent incorrect mounting. **Short** teaches a positive locking manner (100) associated with a first positioning arrangement (90) and a second positioning arrangement (40) defined in a recess (110) substantially as claimed for the purpose of preventing relative rotation between the first positioning arrangement and the second positioning arrangement (col. 3, lines 58-65). The structure of Short inherently provides positioning the first element relative to the second element to prevent incorrect mounting. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to modify Werner's brush seal to include positive locking such that it prevents relative rotation between the two positioning arrangements to prevent the backplate from rotating relative to the housing and to prevent incorrect mounting.

4. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Werner in view of *Short and further in view of* of US 5,066,025 to Hanrahan.

Werner also fails to disclose angled bristles. **Hanrahan** states that it is known in the art that bristles are usually located at an angle with respect to the radius for the purpose of maintaining proper sliding relationship with the rotor (col. 1, lines 21-28). Where the range of article sizes disclosed in the prior art envelops the recited range, and there is no showing of criticality of the

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recited range, such recited range would have been one of ordinary skill in the art. In re Reven, 390 F.2d 997, 156 USPQ 679 (CCPA 1968).

5. **Claims 6, 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner in view Short as applied to the claim 1 above, and further in view of US 6,106,190 to Nakamura.

Short discloses a projection (100) arranged on a first positioning arrangement (90) and a recess (110) on a second positioning arrangement (40) in order to prevent relative rotation between the two positioning arrangements and to prevent incorrect mounting. Werner and Short disclose applicant's invention except the welded projection or a projection formed of non-cut shaping. **Nakamura** teaches a projection (66b in Fig. 5b) on a first positioning element (66B) which fits into a recess (62b) of the second positioning element (60) to prevent the two elements from rotating with respect to one another. Nakamura further disclose a further embodiment having a welded projection (W in Fig. 6b) that serves the same purpose as the projection in Fig. 5b. The projection (W), formed during a non-cutting shaping process also projects beyond one side surface and is lenticular in shape as claimed. Both projections function to prevent the first positioning arrangement, or the projection, from rotating with respect to the second positioning arrangement (60). Inasmuch as the references disclose these elements as art recognized equivalents, it would have been obvious to one of ordinary skill in the exercise art to substitute one for the other. In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982). One skilled

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in the art would incorporate such projections with the motivation to prevent the first positioning element from rotating with respect to the second positioning element.

6. **Claims 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner in view of Short further in view of US 5,066,024 to Reisinger et al.

Werner and Short disclose the invention except the fastening methods as claimed. **Reisinger** teaches a pair of holes (7 and corresponding holes in housing) configured to receive a fastener for the purpose of providing a simple and detachable connection while still maintaining the operability of the seal (col. 1, line 60). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate holes and fasteners to Werner's invention for the purpose of providing a simple and detachable connection to other components.

Response to Arguments

7. Applicant's arguments with respect the positive locking for preventing relative rotation have been considered but are moot in view of the new ground(s) of rejection. Hanrahan fails to expressly disclose the positive locking manner as preventing relative rotation between the first and second positioning arrangements. However, Short provides a very similar positive locking manner between a first and second positioning arrangement for the same relative anti-rotation purpose as claimed by applicant. Thus, prima facie obviousness has been established.

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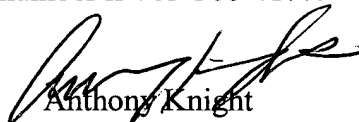
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is related to anti-rotational positive locking arrangements: US 4,889,349 to Muller, US 4,405,134 to Sargent et al., US 4,406,466 to Geary, US 4,451,048 to Pick, US 4,477,227 to Klufas, and US 6,053,697 to Piekarski et al.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Bannapradist whose telephone number is 703-305-4806. The examiner can normally be reached on Mon-Thurs and every other Friday from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.


Anthony Knight
Supervisory Patent Examiner
Technology Center 3600

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March 31, 2003